



50 Years of
Outstanding
achievement

Complete Program

1995/96

The class T 18 was first built in 1912 in Prussia

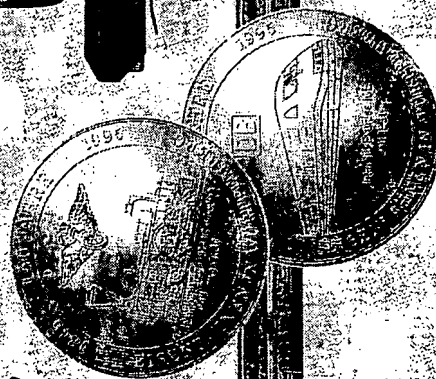
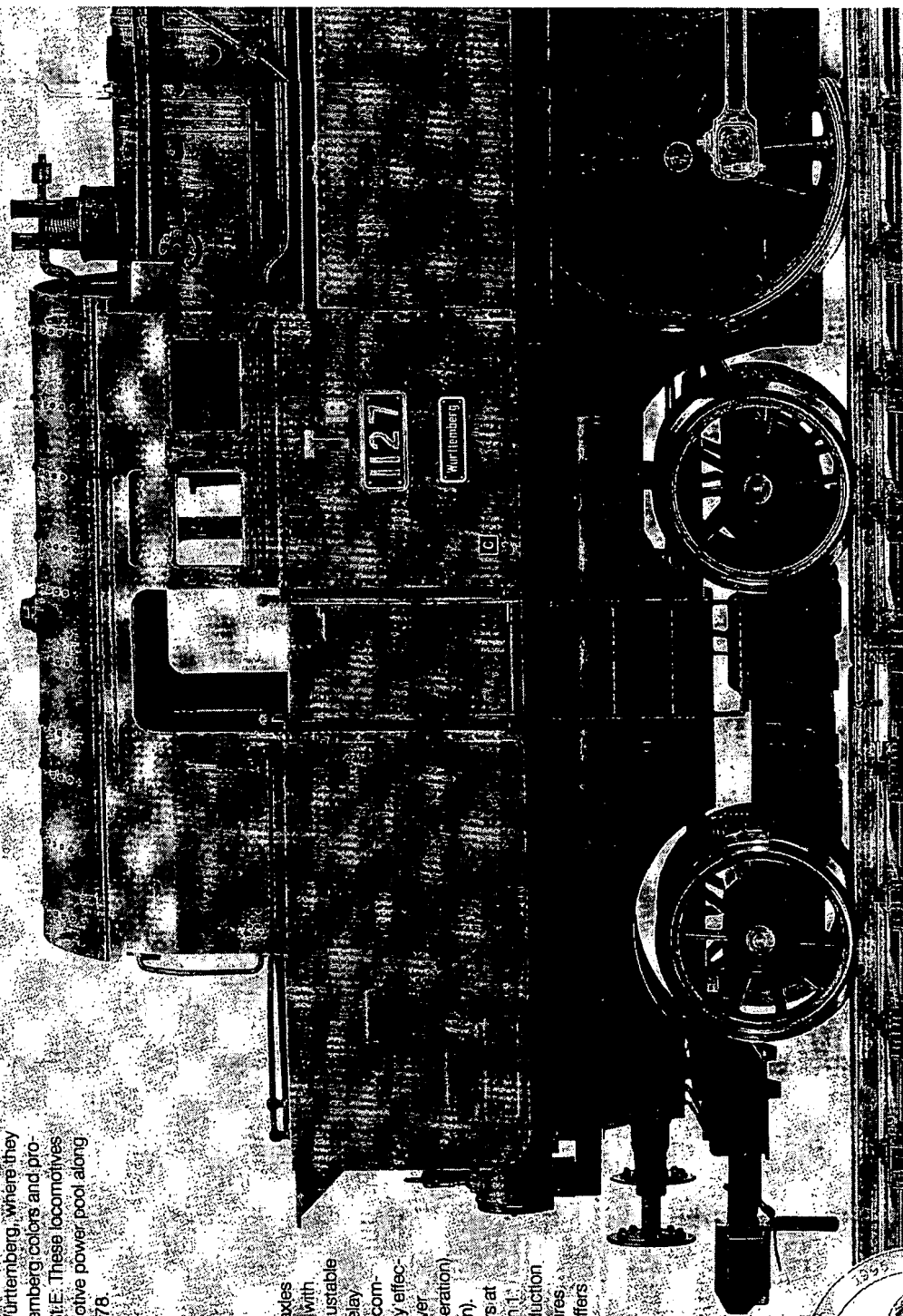
and quickly made a name for itself as a powerful and reliable locomotive. For these reasons this tank locomotive was also purchased by other German and by foreign railroads. In this way 20 of this Prussian design locomotive made their way to Württemberg, where they took up their duties in the typical Württemberg colors and provided very satisfactory results for K.W.St.E. These locomotives were later incorporated into the DRG motive power pool along with the Prussian versions as the class 78.



5524 Tank Locomotive.

Royal Württemberg State Railways (K.W.St.E.) class T 18. 3 axles powered via side rods. Built-in electronic circuit for operation with AC power, DC power or Märklin Digital (Motorola format). Adjustable maximum speed. Adjustable acceleration rate and braking delay (braking delay effective only in digital operation). Built-in load compensation for ascending and descending grades (only partially effective with AC or DC operation). Dual headlights that change over with the direction of travel (can also be turned off in digital operation). Built-in smoke generator (can be turned off in digital operation). Metal frame. Detailed cab with movable doors. Sprung buffers at both ends. The locomotive is delivered with automatic Märklin 1 claw couplers that can be replaced with the prototype reproduction couplers and brake hoses included with this locomotive. Figures of locomotive engineer and fireman included. Length over buffers 46.3 cm (18-1/4").

This model will not operate on curves with a radius less than 1 meter (39").



The Astonishing Potential of Märklin Digital

Märklin
digital

Märklin has catapulted the hobby of model railroading directly into the future with the introduction of digital control.

Märklin Digital controls up to 80 locomotives, 80 function models and up to 256 turnouts, signals or uncoupler tracks. Auxiliary functions such as headlights and/or car lighting, TELEX couplers, sound effects, electronic circuits or smoke generators can be turned on and off independently of the operation of the train. Locomotives can be set for the operating characteristics typical of their prototype, acceleration rate, braking behavior and maximum speed, for example. From the digital locomotive controller, the infrared remote control, to the Memory accessory controller for complete routes on up to control of the layout with a computer, everything is possible that will increase prototypical realism and operating enjoyment.

At first glance this abundance of function is a little confusing in the way it works; it isn't, though. Whether you are just getting started with Digital or whether you are converting your existing Märklin R10 or 1 Gauge layout to Digital, Märklin Digital can be set up step by step.

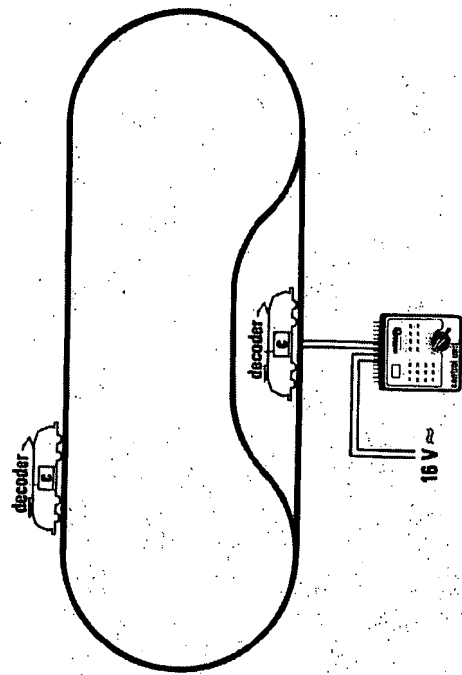
How Does Märklin Digital Work?

With conventional locomotive operations you control the operating voltage in the track or the catenary with the train control transformer; the locomotive goes faster or more slowly or it changes direction. All locomotives in the same power circuit do this simultaneously. You have to isolate areas of track from each other and power each with its own train control transformer to achieve independent locomotive operations.

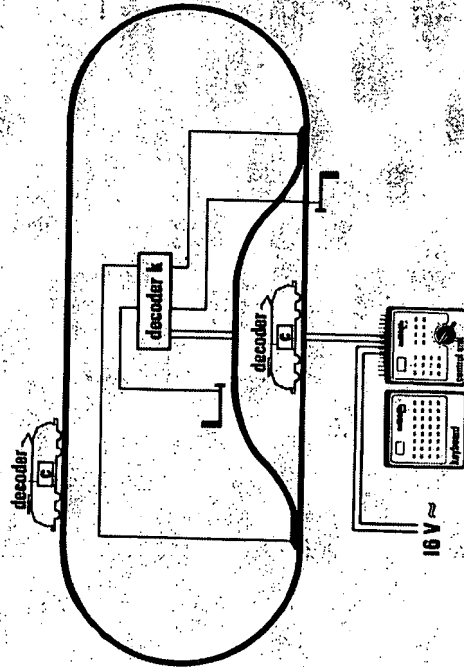
With Märklin Digital the voltage in the track remains constant. Turning the control knob on a locomotive controller does not change the level of the voltage. Instead, the central unit sends control signals through the track. Each control signal contains the address (for the locomotive, turnout or signal) and the actual command (operate faster, switch to stop, etc.). Small receiver components (decoders) are located in the locomotives and they pick up these signals. Initially they check to be sure the command is actually for them, whether the address agrees with their address. If it does, they receive the command. Decoders have their own intelligence for this. For the command "halt" (control knob on the locomotive controller set for zero) they do not immediately switch the current off to the locomotive, they continuously

decrease it, so that the train slowly brakes as in real life. Or for the command "full speed" (control knob on the locomotive controller set as far to the right as it can be turned) they allow only so much operating current to their locomotive so that it reaches a prototypical maximum speed. The accessories also have decoders to recognize the address and to convert commands, whereby a decoder can control four turnouts, signals or eight uncoupler tracks.

The striking thing about Märklin Digital is that this variety of functions does not require extensive wiring – all command signals for 80 locomotives and 256 accessories go out over a single, existing conductor – the track. Only the accessories require two control lines to their decoder.



These drawings show the principles of the Digital system.



Märklin Digital for H0 and 1

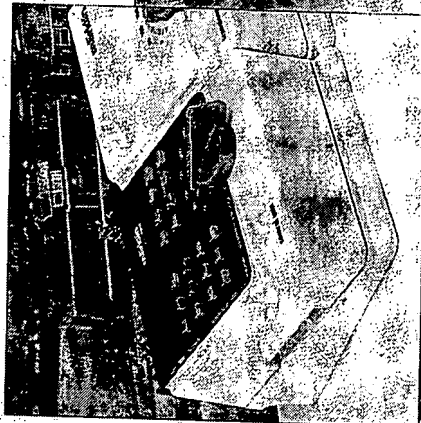
Starting out with small steps

All you need to get started in the digital age is a Märklin DELTA-starter set supplemented by a digital locomotive controller, the 6021 Control Unit. The train control transformer that comes with the starter set can be used to supply power in the form of 16 volts AC to the Control Unit.

In the Märklin H0 system you will find DELTA starter sets (see pages 16-19 and 98-103) in different sizes as well as universal and digital locomotives. In Märklin 1 all Maxi locomotives and standard 1 Gauge models come from the factory ready for digital operation.

Change here, please

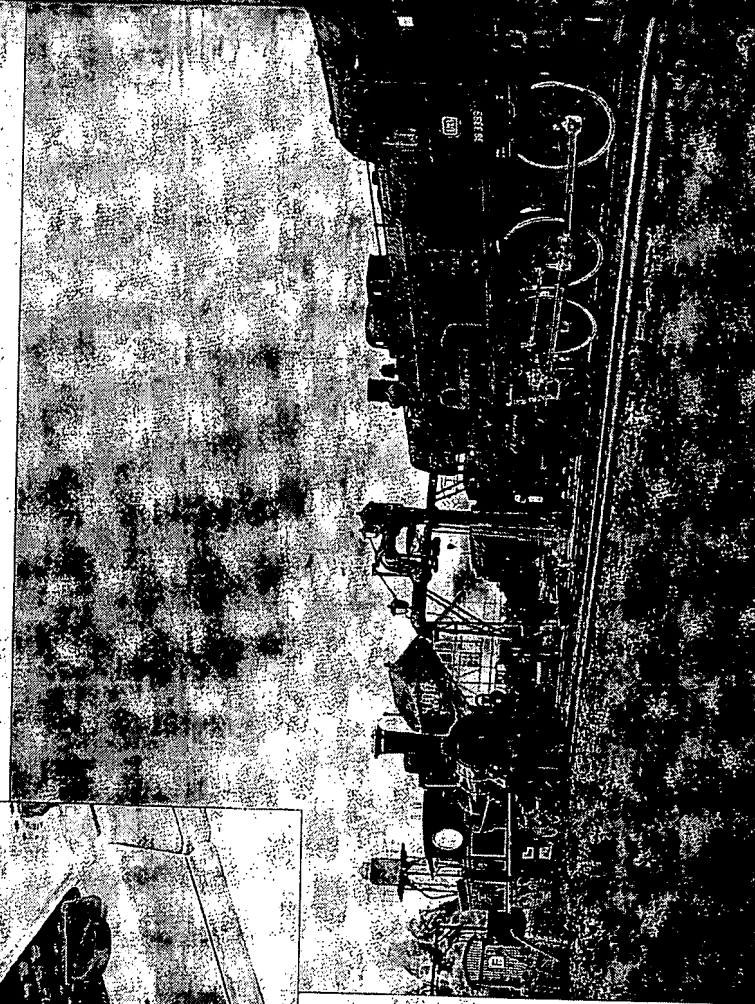
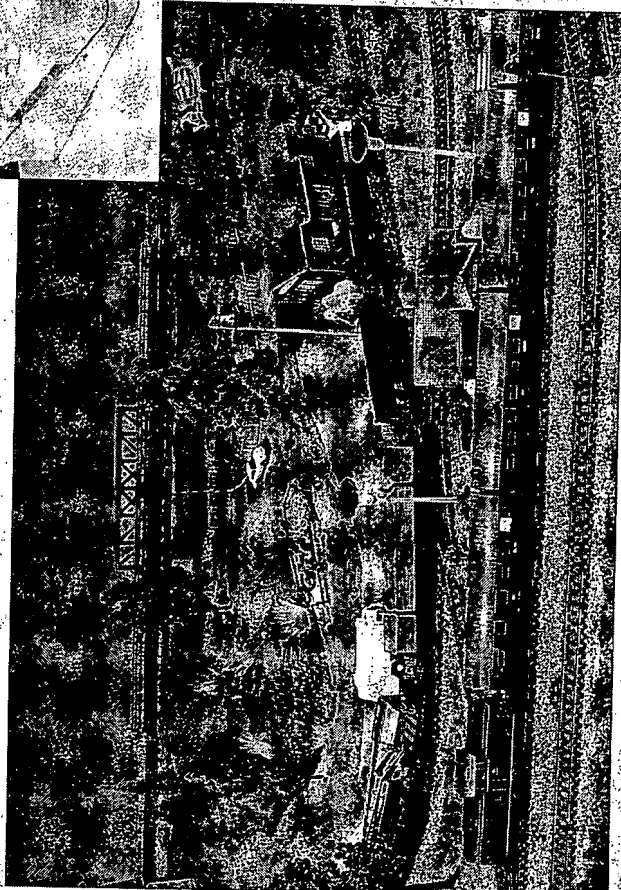
If you want to convert your existing Märklin H0 or 1 layout to Digital, in principle what you need is a Control Unit as a central unit as well as DELTA or digital decoders that your authorized dealer will use to retrofit your conventional locomotives. An already existing train control transformer can be used to supply power. The Control Unit's full output capability is realized with the 52 VA transformer (42 VA in North America).



Turnouts, signals and uncoupler tracks can continue to be operated conventionally with control boxes. Anyone who has set up the wiring on his layout with patience and care so that it is neat and clean and who doesn't want to destroy this beautiful workmanship can stay with conventional operation of the accessories. On the other hand, anyone wanting to make use of the additional functions of digital technology or wanting to save wiring when expanding, will use the digital Keyboard and decoders for his accessories.

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The Heart of Every Märklin Digital Layout

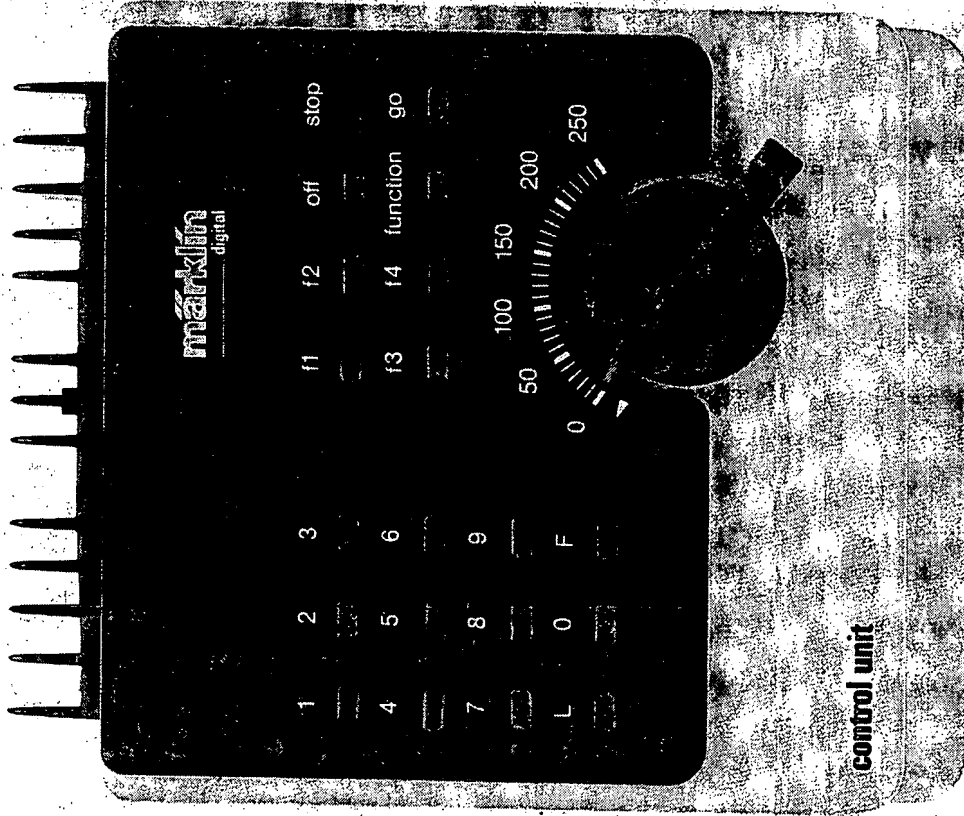
6021 Control Unit

The midpoint of the digital age is the Control Unit for every Märklin Digital layout in H0 and 1. In principle it combines the functions of three components: It is first a *locomotive controller* for operating locomotives, second a *Booster* for supplying the layout with current to operate locomotives and accessories, and third it is the *central unit electronics circuit* which processes all commands for other control components. The Control Unit collects and stores all commands for locomotives and accessories and sends them as data signals to the track.

The Control Unit can recognize up to 80 locomotives. It calls up locomotive addresses from 01 to 80 with the 10 button keypad. You then control the locomotive whose number appears on the two-digit display and you can manually operate the locomotive as you wish. The control knob is used for setting the speed, the function button is for controlling any of these functions: headlights, TELEX couplers or smoke generator. When a new address is called up, this locomotive continues to run with the speed last set for it. The power supplied to the layout through the Control Unit is limited for reasons of safety.

Progress with Märklin Digital

The rapid development of electronics continues with Märklin Digital and is expanding the variety of functions. By using the proven Motorola format we have created the requirement that you will always be on top with Märklin Digital, even in the future: Märklin Digital is designed to be modular. New functions can be integrated and retrofitted easily by exchanging individual components. So, with Märklin Digital you're always installing the future now.



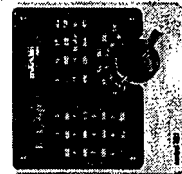
6021 Control Unit.

Central unit for Märklin H0 and 1 layouts with built-in locomotive controller. Supplies the layout with power and control commands. The built-in locomotive controller has the same features as the Control 80 I. Terminal clips for transformer and track layout. 1 multi-pin connector for Booster. LED pilot light. Maximum output current 2.5 amps. Dimensions 135 x 120 x 80 mm (5-1/2" x 4-7/8" x 3-1/2").

The New Ease of Operation with Märklin Digital

After you have become familiar with the Control Unit as the basis for every digital layout, you are then dealing with digital components that are required for additional power supply when expanding the layout or components that increase the ease of operation.

If you want to control several locomotives simultaneously or if you want to operate the model railroad layout with your friends, you can connect additional Control 80 f locomotive controllers – some with an Adapter cable at a remote location on the layout, too. A different locomotive is then addressed with each locomotive controller. You have even more freedom of movement with the remote control Infra Control 80 f (receiver) and IR Control (sender).

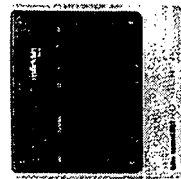


8036 Control 80 f.

Locomotive controller. Access to 80 locomotive and function addresses. Address entry using 10 button keypad. Two-digit display of the locomotive address currently called up. On and off buttons for the locomotive auxiliary function. 4 combined on/off buttons for additional functions. Function status shown by LEDs. Emergency halt and release buttons. Can be connected to Control Unit or another Control 80 f. Dimensions 135 x 120 x 80 mm (5-1/2" x 4-7/8" x 3-1/2").

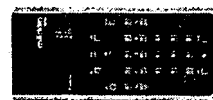
6070 Infra Control 80 f.

Infrared receiver for transmitting control commands from the IR Control. Access to 80 locomotive and function addresses. Can be used with up to 4 IR Control units. Indicators for the current locomotive address called up and for the 5 locomotive functions. Separate receiver probe for installation in or above the layout. Can be connected to the Control Unit or Control 80 f. Dimensions 135 x 120 x 80 mm (5-1/2" x 4-7/8" x 3-1/2").



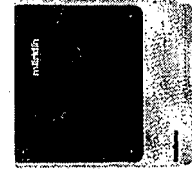
6071 IR Control.

Infrared hand sender for controlling locomotives. Access to 80 locomotive addresses. Switch for setting the sender address (1-4). On and off buttons for 5 locomotive functions. The commands sent by the IR Control are carried out by the Infra Control 80 f. The battery necessary for operation is not included. Dimensions 147 x 65 x 21 mm (5-3/4" x 2-9/16" x 13/16").



More power for more trains

As with a conventional layout, you have to feed additional power for operations with several trains running at the same time, for additional power consumers such as train lighting or for a large number of signals and turnouts. You do this by dividing the layout into different power supply areas. After the Control Unit a Booster, each with its own transformer, is required for each area.



6000 100 volts Japan 50 VA.
6001 110 volts USA. 42 VA UL/OCSA tested.
6002 230 volts. 52 VA.
6003 240 volts. 52 VA.

Transformer.

Transformer for supplying power to the 6021 Control Unit or 6017 Booster. Suitable for supplying power to conventionally controlled Märklin accessories. 16 volt alternating current. LED pilot light. Dimensions 135 x 120 x 80 mm (5-1/2" x 4-7/8" x 3-1/2").

The 6000, 6001, 6002 and 6003 transformers are not to be set up outdoors. They must be protected against moisture.

N

6017 Booster.

Output supply unit for large, digitally controlled Märklin H0 and Märklin 1 layouts. Maximum output current 2.5 amps. LED pilot light. With switchable voltage reduction for slow speed areas as with the 6021 Control Unit. 2 each terminal clips for transformer and track. 1 each multi-pin connector for Control Unit and additional Boosters. 1 adapter cable for connection to Control Unit. Dimensions 135 x 120 x 80 mm (5-1/2" x 4-7/8" x 3-1/2").



6038 Adapter 180.

Extension cable for remote setup of the Control 80 f, Keyboard, Memory, Interface or Infra Control 80 f. Ribbon cable with 2 plug-in sockets for the Digital system. Length 180 cm (71").



6039 Adapter 60.

Looks and functions like the Adapter 180. Length 60 cm (23-1/2").

See "General Information" on the inside of the catalog cover.

6072 Extension Cable.

3 meter (117") long connecting cable for remote installation of the receiver probe from the Digital remote control Infra Control 80 f (6070).



While a digital locomotive can also be run on a conventional layout (but only with the functions of a conventional locomotive), the reverse applies only in a limited fashion to conventional locomotives. The locomotive needs a decoder that understands the digital commands and feeds the operating current to the locomotive. This can be either a DELTA module or a digital decoder; both of these can be retrofitted in Märklin locomotives.



6603 DELTA Module.

Electronic component for converting conventional Märklin H0 locomotives to the DELTA multi-train system. Locomotives with the Märklin flat or drum-style commutator motor can be converted. Converted locomotives can be operated with conventional transformer, the DELTA Control or Märklin Digital. Locomotive headlights change over with the direction of travel. Headlights on when the locomotive is in motion. Dimensions 36 x 21 x 4 mm (1-3/8" x 13/16" x 1/8").

The possibilities for converting Märklin H0 locomotives to the DELTA multi-train system can be found in the table "Spare Parts for Locomotives" (pages 148-154).



6080 c 80 Decoder.

Decoder for Märklin H0 locomotives with alternating current motor. Can be controlled with the Control Unit (6021). 1 locomotive function. Can be coded for 80 different locomotive addresses. Dimensions 36 x 21 x 9 mm (1-3/8" x 13/16" x 3/8").



6081 c 81 Decoder.

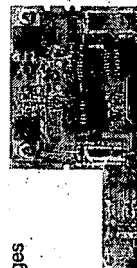
Decoder for H0 locomotives with pickup shoe and permanent magnet motor. Can be controlled with the Control Unit (6021). 1 locomotive function. Can be coded for 80 different locomotive addresses. Dimensions 36 x 21 x 9 mm (1-3/8" x 13/16" x 3/8").

Märklin's high-efficiency propulsion offers even more prototype realism. It can be used to set the acceleration and braking characteristics as well as the maximum speed for the locomotive. In addition, the electronics in this propulsion can recognize deviations in the motor rpm and adjust it accordingly. This gives the locomotives outstanding slow speed characteristics and almost constant speed on ascending or descending grades.



6090 Digital Propulsion Set.

Consists of locomotive decoder and high-efficiency motor. Can be controlled with the Control Unit (6021). For Märklin H0 locomotives with drum-style commutator motor. Adjustable maximum speed, acceleration and braking delay. Motor monitored on ascending and descending grades. Can be coded for 80 different locomotive addresses. Decoder dimensions 36 x 21 x 9 mm (1-3/8" x 13/16" x 3/8").

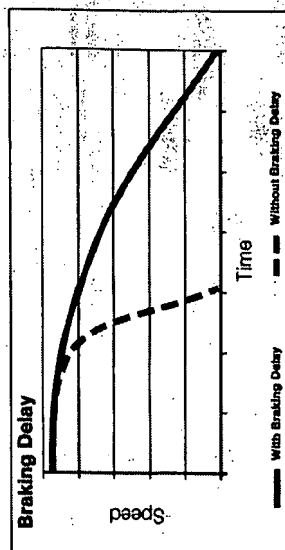
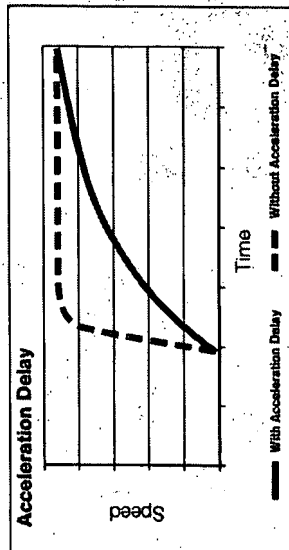
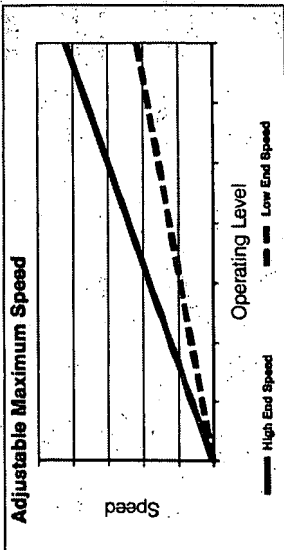


6095 c 95 Decoder.

Decoder for standard design single motor Märklin 1 locomotives. Can be controlled with the Control Unit (6021). Up to 5 controllable locomotive functions. Can be coded for 80 different digital addresses. Adjustable maximum speed, acceleration and braking delay. Built-in load-dependent speed control. Dimensions 61 x 50 x 10 mm (2-3/8" x 1-31/32" x 3/8").

In addition to the c 95 decoder (6095) in the standard program, the 86095 decoder is offered as a spare part for converting double motor Märklin 1 locomotives. The smaller Märklin 1 locomotives (such as the Koi or T 3) with special electronic circuits can be converted by the Märklin Service Department to digital operation with the Control Unit (6021).

All of the current Märklin 1 digital decoders can be used only with the Control Unit (6021) and not with the older Central Control 1 (6030).

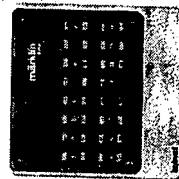


The diagrams present the principles of this propulsion concept.

Controlling Accessories Digitally

The great advantage of controlling turnouts, signals and other accessories digitally is in the ease of operation. On conventional layouts miles of wiring to the area of operation are often required, while with digital control only short control wires from the accessory to the decoder are needed. The decoders are installed out in the area of the accessories to which they are assigned. Each decoder can be used with any four accessories.

The Keyboard is used to control the accessories, and the settings for the latter are clearly indicated by LEDs. Four decoders are assigned to each Keyboard for a total of 16 accessories that can be operated individually.



6040 Keyboard. Controller for 16 solenoid accessories. LEDs show settings for turnouts and signals. Coding switches for setting the Keyboard address (1-16). Memory storage for the last valid turnout and signal settings after power is shut off. Can be connected to Control Unit or another Keyboard or Memory. Dimensions 135 x 120 x 80 mm (5-1/2" x 4-7/8" x 3-1/2").



6073 k 73 Turnout Decoder. Can be installed in M track turnouts and double slip switches 5128, 5137, 5140, 5202 and 5207.

Important Information!



Märklin digital decoders and components are complex electronic systems designed for Märklin models. We can guarantee compatibility and functional reliability only when original Märklin parts and components are used.

The warranty becomes invalid if non-original Märklin parts or other makes of parts not authorized by Märklin are used.

The k 83 decoder controls four accessories such as turnouts, signals and uncoupler tracks. The k 84 decoder is used to switch track power circuits, lighting circuits or function models. The k 73 decoder is an alternative to the k 83 decoder for mobile layouts with M track.



6083 k 83 Decoder. Decoder for controlling, turnouts, signals or uncoupler track. Can be activated by Keyboard, Switchboard, Memory or Interface. Coding switches for setting decoder address. 4 outputs for solenoid accessories. Dimensions 100 x 54 x 22 mm (4" x 2-1/8" x 7/8").



6084 k 84 Decoder. Decoder for turning on/off continuous current for lighting circuits or motors in accessories. Can be activated by Keyboard, Switchboard, Memory or Interface. Coding switches for setting decoder address. 4 outputs for solenoid accessories. Dimensions 100 x 54 x 22 mm (4" x 2-1/8" x 7/8").



6088 s 88 Decoder. Feedback module for contact generators on digital model railroad layouts. Can be connected to the Memory or Interface with the cable included with this unit. Connector socket for additional s 88 decoders. 16 inputs for contact generators. Dimensions 124 x 54 x 23 mm (4-7/8" x 2-1/8" x 29/32").



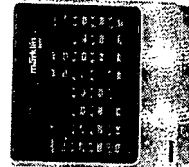
6089 Adapter s 88. Longer connecting cable for s 88 decoder. Length 200 cm (78-3/4").

Routes at the push of a button

Many switching procedures repeat themselves in model railroad operations. Example: For a train to enter a station track, you must always switch the same entry turnouts and signals.

The routine switching sequence can be recorded, stored and called up again in the Memory, just as you would with a tape recorder. Up to 24 routes, each with up to 20 setting commands for turnouts and signals, can be set up automatically at the push of a single button in this manner. A maximum of four Memories can be used on a layout. Automatic block operations or reliable control of a staging yard can be realized with the Memory and the s 88 feedback module decoder.

If you want to control your layout with a track diagram control board, the Switchboard is used for the connections between different makes of track diagram control board systems and the accessories. A Keyboard is not required then.

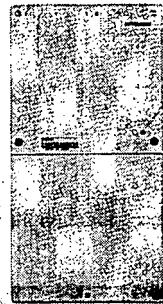
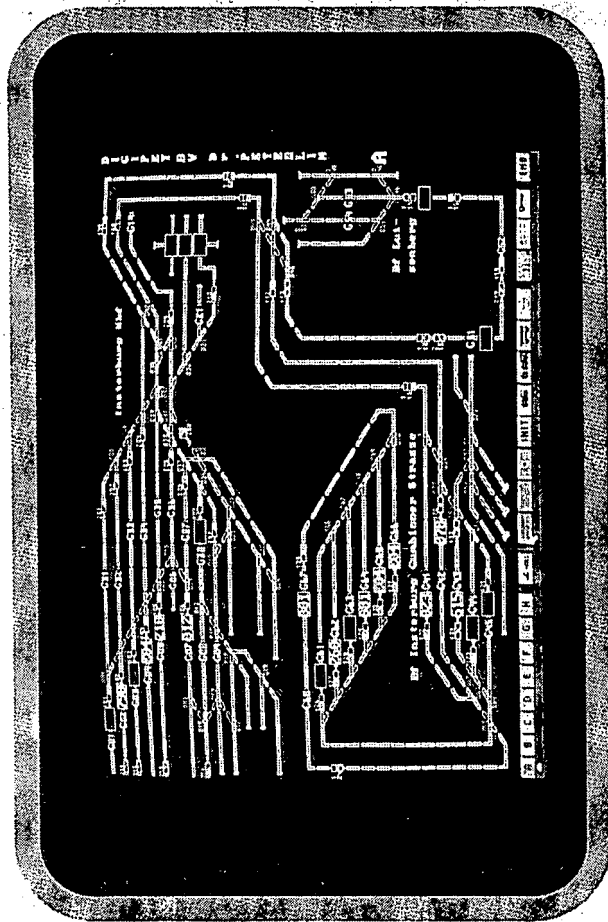


6043 Memory. Route controller. Several solenoid accessories can be switched with the press of a button. Stores in each of 24 routes the position commands for up to 20 turnouts or signals. A maximum of 4 Memory units can be used with the Control Unit. Position commands are entered with a Keyboard, Switchboard or Interface. Operation is also possible without the accessory controllers. Routes currently called up indicated by LEDs. The routes and the last current status for the unit remain in memory storage after the power is turned off. Suitable for automatic operation. Dimensions 135 x 120 x 80 mm (5-1/2" x 4-7/8" x 3-1/2").

A Computer Game That Means Something

Digital is the language of the computer, and it is only logical that you be able to control a Märklin digital layout with a personal computer. The computer is connected to the 6051 Interface with a cable. All 80 locomotive addresses and/or 256 accessory addresses can be addressed. In addition, you can have feedback data generated by contacts and transmitted by the s 88 feedback module decoder.

The computer must be appropriately programmed so that it can be used to control a layout. If you are not a professional programmer or a computer enthusiast, there are special programs for model railroad control. They are offered by different companies for computer platforms such as DOS, Windows or Macintosh. The extent of their functions and the ease of operation with them varies: layout planning, computer supported track diagram control board, safeguard systems right on up to the generation of automated operating procedures. You can also assign the computer partial tasks and manually use it for operations. A diskette with an introduction to programming and a demo version of a program from Modellplan Company (authorized by Märklin) are included with the Märklin Interface.



6041 Switchboard.

Controller for 16 solenoid accessories. Can be connected to a track diagram control board for operating turnouts and signals. Connects to digital components with Adapter 180 or Adapter 60 or directly to another Switchboard. Memory storage for the last valid turnout and signal setting after power is shut off. Dimensions 210 x 110 x 32 mm (8-1/4" x 4-5/16" x 1-1/4").

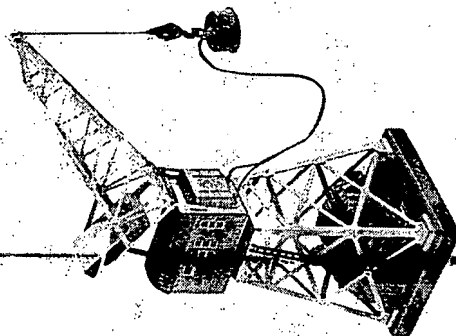


6051 Interface.

Link to a computer. 80 locomotive addresses and 256 accessories can be controlled through this unit. Connector for s 88 (6088) feedback module decoder. Output features are the same as the previous 6050 Interface. A cable for a computer (FS-232-C, 9 pole connection) and a diskette with demo programs are included with this unit. Can be connected to Control Unit or Control 80 f. Dimensions 135 x 120 x 80 mm (5-1/2" x 4-7/8" x 3-1/2").

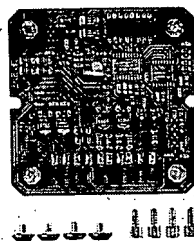
Digital Function Models

The icing on the cake for model railroad operations is the digital control of function models. When the 7051 rotary crane is equipped with the 7652 digital retrofit kit, the speed for lowering and raising the load and for rotating the cab and boom can be varied with a fine touch. This makes it possible to position the rotary crane very precisely.



7051 Remote Control Rotary Crane.

The rotary crane in the conventional version (see page 279) can be equipped with the 7652 retrofit set for digital operation.

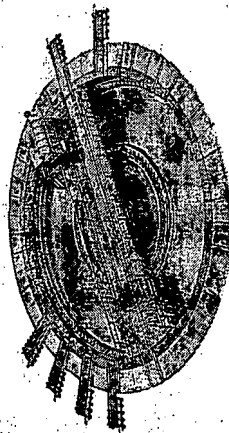


7652 Digital Retrofit Kit for Rotary Crane.

Consists of crane decoder and all necessary hardware. For converting the 7051 remote control rotary crane to digital operation.

When the 7286 turntable is converted with the 7687 digital retrofit set, each track can be selected directly with automatic indexing or the locomotive can be turned 180 degrees automatically, this in addition to the usual functions for the turntable.

All of these models can be used with the 6021 Control Unit only.



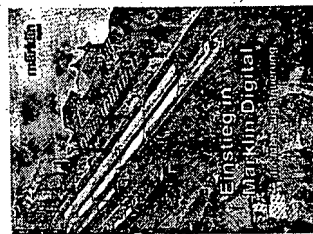
7286 Remote Control Turntable.

The turntable in the conventional version (see page 277) can be equipped with the 7687 retrofit set for digital operation.



7687 Digital Retrofit Set for 7286 Turntable.

Enables easy control of the turntable with track indexing in the Digital system. Deck turns to the right/left in single steps and continuously. Consists of electronic control circuit with digital decoder, all necessary hardware and complete instructions.



0308 Book "Getting Started with Märklin Digital - the multi-train control system".

Complete description of the Märklin DELTA and Märklin Digital systems. Step-by-step presentation of the necessary components. Focal points are the uncomplicated setup and the easy-to-use manual control of a layout with this multi-train control system. 230 pages. Format 17.5 x 24.5 cm (6-7/8" x 9-5/8"). German text. Note: English text version to be available later.

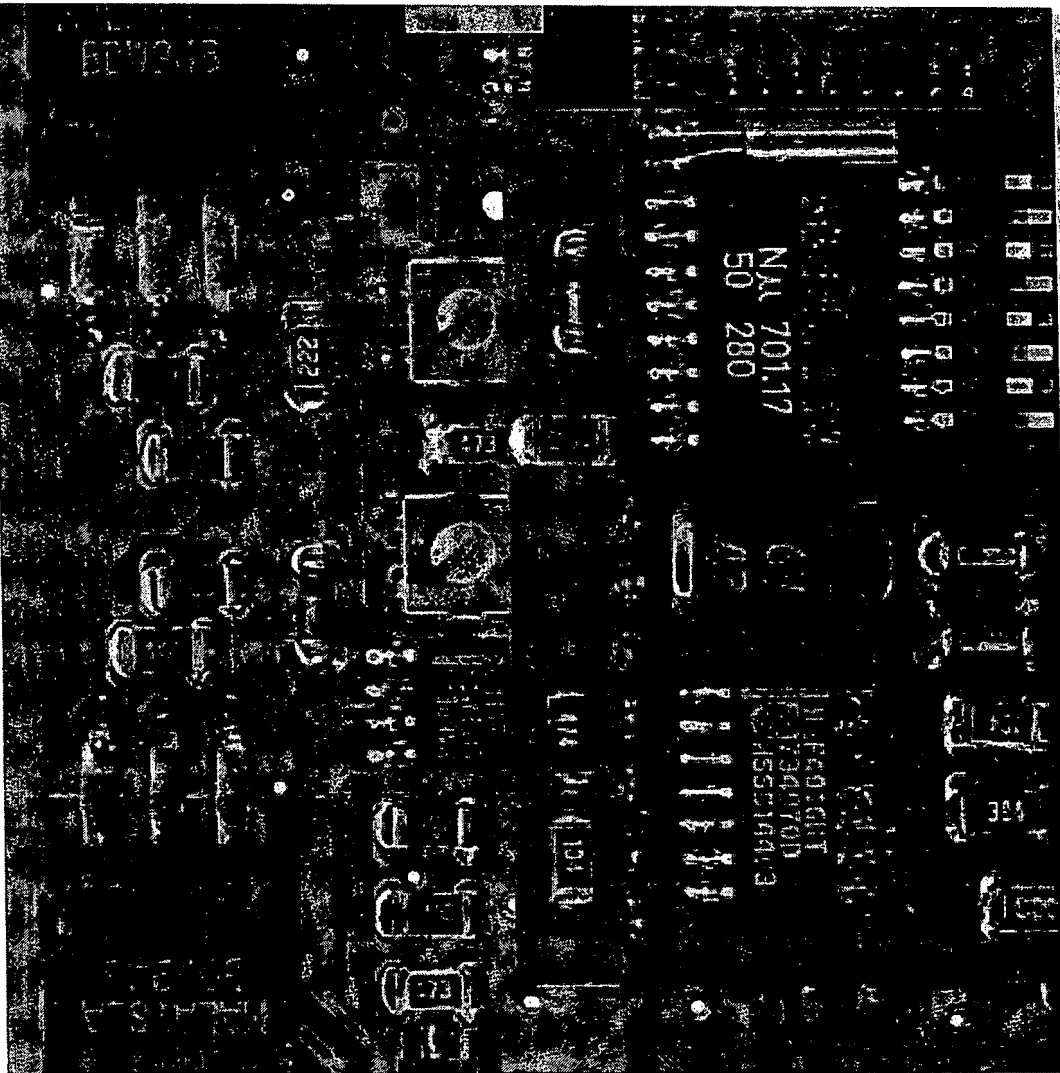


2604 Digital Turnout Set.

Contents: 1 pair of 5137 turnouts with built-in digital decoders. Expands the earlier 2602 digital starter set. Permanently coded for accessory buttons on the Central Control.

List Of Current Digital Components

Item no.	Description	H0 ≈	1
2604	Turnout set	•	
6001/6002	Transformer	•	•
6017	Booster	•	•
6021	Control Unit	•	•
6036	Control 80 f	•	•
6038	Adapter 180	•	•
6039	Adapter 60	•	•
6040	Keyboard	•	•
6041	Switchboard	•	•
6043	Memory	•	•
6051	Interface	•	•
6070	Infra Control 80 f	•	•
6071	IR Control	•	•
6072	IR extension cable	•	•
6073	k 73 decoder	•	•
6080	c 80 decoder	•	
6081	c 81 decoder	•	
6083	k 83 decoder	•	•
6083	k 84 decoder	•	•
6088	s 88 decoder	•	•
6089	Adapter s 88	•	•
6090	c 90 decoder	•	
6095	c 95 decoder	•	•
6603	DELTA module	•	



A classic under steam

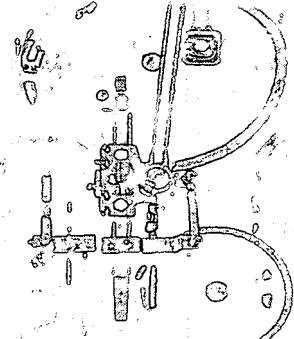
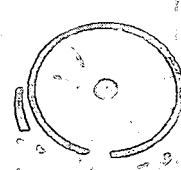
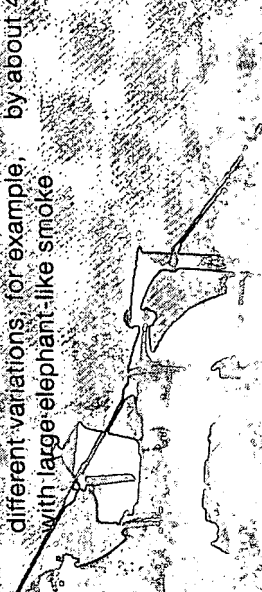
The class 38 (P 8) is an icon of railroad history. In many thousands of versions it performed its service reliably not only at the head of passenger trains, but also at the head of express and freight trains. The P 8 came in different variations, for example, with large elephant-like smoke

deflectors. Witte deflectors, or in provincial railroad versions. The most original – and therefore the most popular with model railroaders – is the class 38 with a tub-style tender which increased the amount of water and coal carried by about 40%.

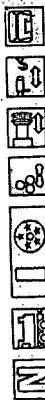
Our model reproduces the typical image of the class 38 with a tub-style tender in all of its details. So detailed that you don't even have to squint your eyes to feel as if you've been transported back to the 1950s.

Smoke generator, whistle, sound effects electronic circuit and the high-efficiency propulsion that can be programmed for typical operating characteristics complete the illusion – Holly wood couldn't do it better.

with large elephant-like smoke



märklin



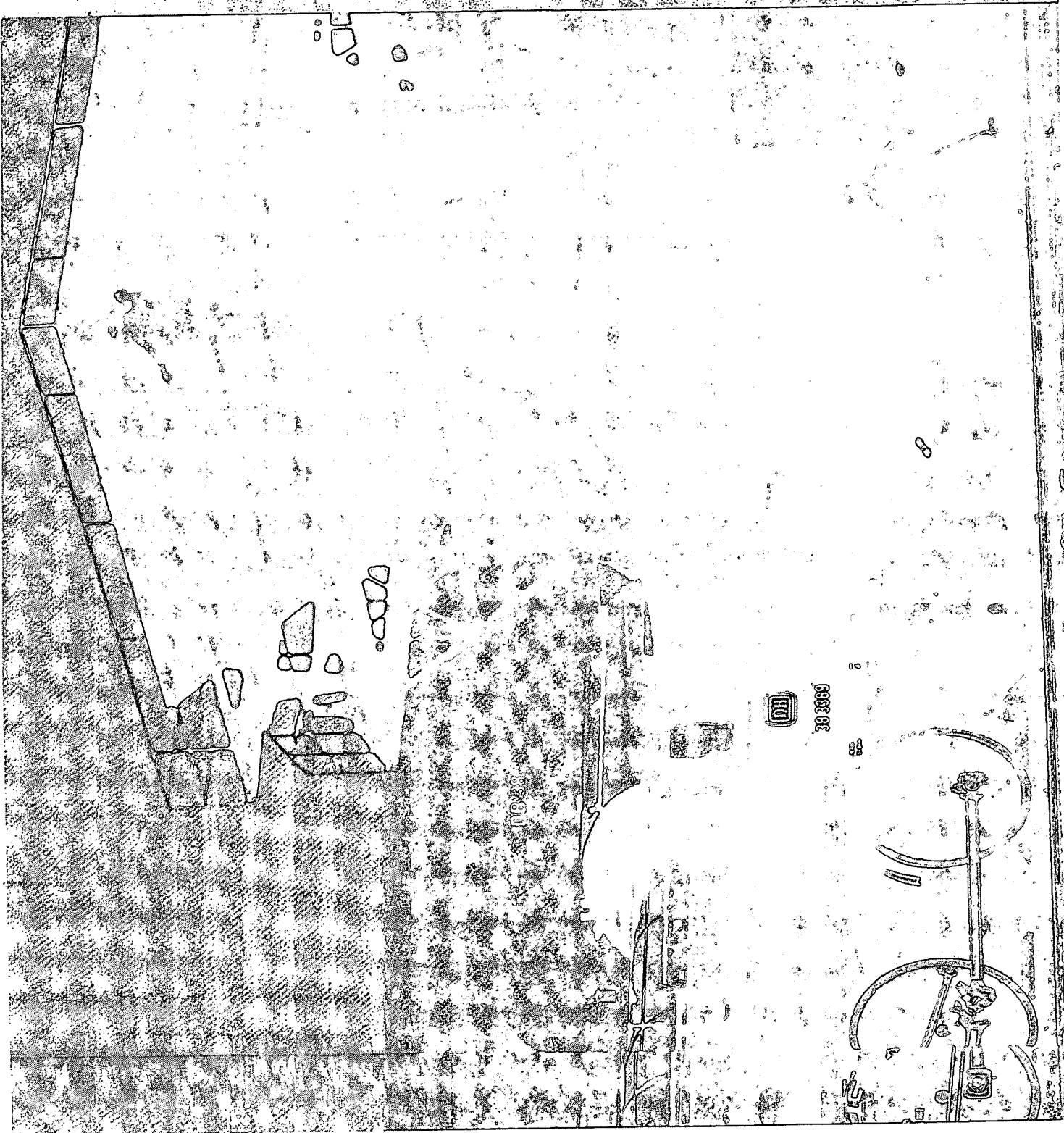
5597 Passenger Locomotive with Tender Style Tender.

German Federal Railroad (DB) class 38. 3 axes powered via side rods. Built-in electronic circuit for operation with AC power, DC power or Märklin Digital (Motorola format). Adjustable maximum speed. Adjustable acceleration rate and braking delay (braking delay effective only in digital operation). Built-in load compensation for ascending and descending grades (only partially effective with AC or DC operation). Headlights can also be turned off in digital operation. Built-in smoke generator (can be turned off in digital operation). The electronic circuit built into the tender produces realistic steam sounds. A whistle sound can be activated at any spot on a layout with 2 track magnets included with the unit. The whistle sound can also be activated in digital operation from a locomotive controller. Detailed cab with movable doors. The locomotive is delivered with automatic Märklin 1 claw couplers that can be replaced with the prototype reproduction couplers and brake hoses included with this locomotive. Figures of locomotive engineer and fireman included. Length over buffers 64.0 cm (25-3/16").

This model will not operate on curves with a radius less than 1 meter (39").

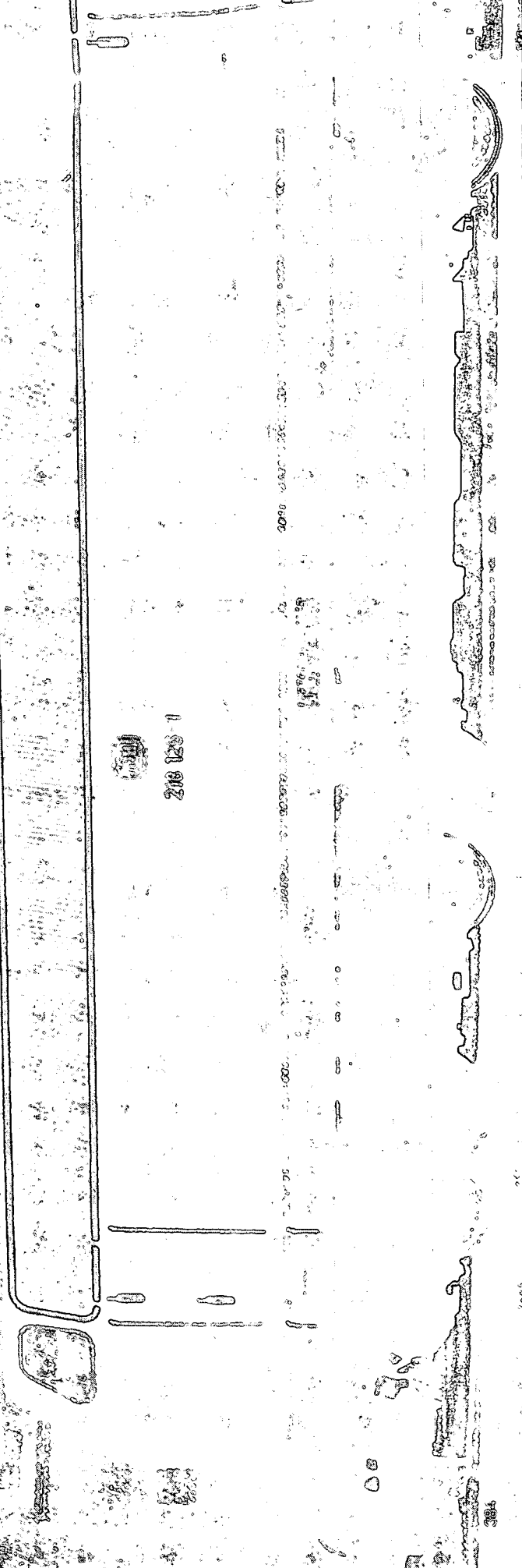
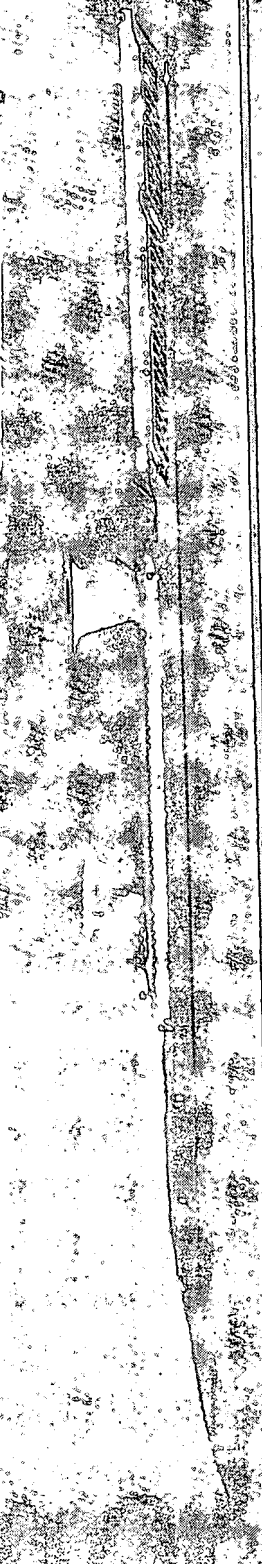
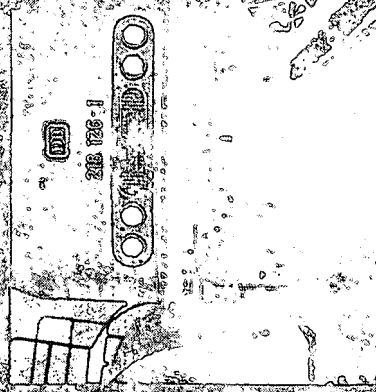


383



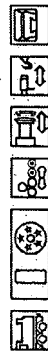
What is meant here by standard locomotive?

For anyone who has ever heard its 2,500 HP roar or has seen it thunder by with a heavy freight train the class 218 is more than a standard locomotive for the modern railroad. The 12 cylinder motor makes the display of power, preferably quiet and unnoticeable for the electrical traction, into a spectacular scene that pulls more than just the hard-boiled railroad fan into its orbit. Thanks to its long history - the first V 160 of the pilot series was in operation as early as 1960 - and different design variations, it is quite suitable for making up passenger and freight trains in the areas from the 1960s to the present.



Since 1963 the German Federal Railroad has purchased different versions of the V 160. Based on the experience acquired with this locomotive class, the more powerful versions of the class 218 were designed at the end of the 1960s. In 1971 series production of this more powerful locomotive was started. At about 1,840 kilowatts (2,500 horsepower) it is approximately 30% more powerful than its predecessors. The maximum allowable speed for this unit is 140 km/h (88 mph) up to 20 km/h (13 mph) more than the maximum speed of the predecessor units. The class 218 is still the standard locomotive on non-electrified routes of the German Federal Railroad.

DB 218



5571 Diesel Locomotive.

German Federal Railroad (DB) class 218. 1 motor powers all 4 axles. Built-in electronic circuit plate for optional operation with AC, DC power or Märklin Digital. Adjustable maximum speed. Adjustable acceleration rate and braking delay (braking delay effective only in digital operation). Built-in load compensation for ascending and descending grades (only partially effective with AC or DC operation). Headlights can also be turned off in digital operation. Automatic Märklin 1 claw couplers at both ends, interchangeable with reproduction prototype couplers included with unit. Ready for installation of a diesel sound effects circuit plate. Length over buffers 51.5 cm (20-1/4").

This model can be operated on track with a minimum radius of 1 meter (39 inches).

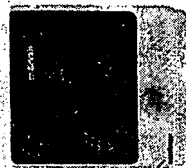
85571 Diesel Locomotive.

Same as 5571, but with different road number and without exhaust shields on the roof. This model is lightly weathered.

The 85571 locomotive is sold out at the factory. Your dealer has already placed orders for this unit.

Conventional Train Operation

All Märklin 1 locomotives will operate with no problems on conventional layouts. Transformer, locomotive controller, two wires and some track - this is all that's needed to get started.



- 6000** 100 volts Japan. 50 VA
- 6001** 110 volts USA. 42 VA. UL/CSA tested.
- 6002** 230 volts. 52 VA
- 6003** 240 volts. 52 VA

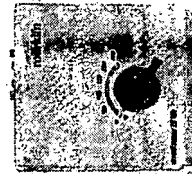
Transformer. Transformer for powering the 6806 locomotive controller. LED pilot light. 2 pairs of terminal clips. 52 VA/42 VA output. 16 volt AC output. Plastic housing. Weight 1.6 kilograms (3-1/2 pounds). Dimensions 135 x 120 x 80 mm (5-1/2" x 4-7/8" x 3-1/2"). VDE/UL/CSA approved.

The 6000, 6001, 6002 and 6003 transformers cannot be set up outdoors. They must be protected from moisture.



6806 Locomotive Controller. For indoor and outdoor operation. Connect to a Märklin 6000/6001/6002/6003 transformer or to the accessory terminals/sockets of a Märklin transformer with a 30/32 VA output. Accessory current 16 volts. Locomotive voltage can be controlled steplessly. Plastic housing. Dimensions 135 x 120 x 80 mm (5-1/2" x 4-7/8" x 3-1/2").

7107 Extension Cable. This 10 meter (32 feet 6 inches) cable is recommended when the transformer is set up indoors and the locomotive controller is set up outdoors.

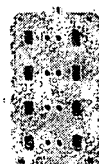


6645 100 volts Japan. 32 VA
6647 230 volts. 32 VA
Transformer 32 VA.
 Track current adjustable between 4 and 16 volts. Accessory current 16 volts. Plastic housing. Dimensions 120 x 140 x 80 mm (4-3/4" x 5-1/2" x 3-1/2").

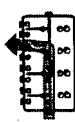
This 32 VA transformer (6647) is suitable for operation of a Märklin 1 layout indoors only. The 6806 locomotive controller together with a 6000/6001/6002/6003-transformer can be used for operation outdoors.



- 6627** 110 volts USA. 30 VA. UL/CSA tested.
- 6629** 240 volts. 30 VA.
- Transformer.** 30 VA output. Track current adjustable from 4 to 16 volts. Accessory current 16 volts. Plastic housing. Red pilot light. Dimensions 158 x 135 x 75 mm (6-1/4" x 5-5/16" x 3").



7271 Control Box with Feedback Function.
 With 8 sockets for connecting 4 double solenoid accessories. Automatic feedback of the accessory setting with LED's when the 5625 turnout mechanism is used. Length 80 mm (3-1/8"). Width 40 mm (1-9/16").



Schematic of 7271 (button 3 pushed)



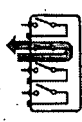
7272 Control Box.
 For controlling 4 double solenoid accessories. The position of the buttons shows the setting for the signals, turnouts, etc. Length 80 mm (3-1/8"). Width 40 mm (1-9/16"). Replaces the 7072 control box.



Schematic of 7272 Button 3 pushed)



7273 Control Box.
 For turning 4 different track or accessory circuits on and off. For example, power can be controlled in 4 storage sidings in 4 different track circuits. Length 80 mm (3-1/8"). Width 40 mm (1-9/16"). Replaces the 7211 control box.



Schematic of 7273 (Button 3 pushed)



7274 Control Box.
 For dividing or switching a track or accessory circuits into 4 different circuits. For example, 4 accessory circuits for building illumination can be turned on or switched over. Length 80 mm (3-1/8"). Width 40 mm (1-9/16"). Replaces the 7210 control box.



Schematic of 7274

7209 Distribution Strip.
 Has 11 electrically linked connections. Dimensions 50 x 20 mm (2-3/4" x 1-1/16").

Wire
 The copper conductor in this wire consists of 24 separate strands each 0.10 mm (0.004") in diameter with a total cross section of 0.19 sq. mm (0.008 sq. in.).

- 7100 Wire.** Single conductor. Gray. 10 m (33').
- 7101 Wire.** Single conductor. Blue. 10 m (33').
- 7102 Wire.** Single conductor. Brown. 10 m (33').
- 7103 Wire.** Single conductor. Yellow. 10 m (33').
- 7105 Wire.** Single conductor. Red. 10 m (33').

Sockets. Bag with 10 pieces.
7111 Sockets. Brown.
7112 Sockets. Yellow.
7113 Sockets. Green.
7114 Sockets. Orange.
7115 Sockets. Red.
7117 Sockets. Gray.

Plugs with Side Socket.
 Bag with 10 pieces.
7131 Plugs. Brown.
7132 Plugs. Yellow.
7133 Plugs. Green.
7134 Plugs. Orange.
7135 Plugs. Red.
7137 Plugs. Gray.

0241 Smoke Fluid.
 This smoke fluid is used with the smoke unit built into many Maxi or Märklin 1 steam locomotives to produce smoke. Follow the instructions for use included with each locomotive.

7149 Oiler with Narrow Applicator Opening.
 Contains 10 ml (0.0338 oz.) of special oil for lubricating locomotives and cars.

6000 100 volts Japan. 50 VA
6001 110 volts USA. 42 VA UL/CSA tested.
6002 230 volts. 52 VA
6003 240 volts. 52 VA

Transformer. Transformer for supplying power to the 6021 Control Unit or 6017 Booster. LED pilot light. 52 VA output (42 VA for 6001).

The 6000, 6001, 6002 and 6003 transformers are not to be set up outdoors. They must be protected against moisture.

6021 Control Unit.

Central unit with built-in locomotive controller for Märklin H0 and Märklin 1 layouts. Supplies power and control commands to the layout.

6017 Booster.

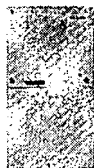
Power output component for large digitally controlled Märklin H0 and Märklin 1 layouts.

6036 Control 80 f.

Locomotive controller. Access to 80 locomotive and function addresses.

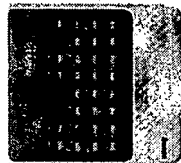
6040 Keyboard.

Controller for 16 solenoid accessories. LEDs show settings for turnouts and signals.



6041 Switchboard.

Controller for 16 solenoid accessories. Can be connected to a track diagram control board for operating turnouts and signals.



6043 Memory.

Route controller. Several solenoid accessories can be switched with the press of a button. Stores in each of 24 routes the position commands for up to 20 turnouts or signals. Maximum of 4 Memories can be connected to the Control Unit.



6051 Interface.

Link to a computer. 80 locomotive addresses and 256 accessory addresses can be controlled through this unit.



6070 Infra Control 80 f.

Infrared receiver for transmitting control commands from the IR Control. Access to 80 locomotive addresses.



6071 IR Control.

Infrared hand sender for controlling locomotives. Access to 80 locomotive addresses.



6095 c 95 Decoder.

Decoder for standard design single motor Märklin 1 locomotives. Can be controlled with the Control Unit (6021). Up to 5 controllable locomotive functions. Can be coded for 80 different digital addresses. Adjustable maximum speed, acceleration and braking delay. Built-in load-dependent speed control. Dimensions 98 x 49 x 13 mm (4" x 1-31/32" x 3/8").

In addition to the c 95 decoder (6095) in the standard program, the 86095 decoder is offered as a spare part for converting double motor Märklin 1 locomotives. The smaller Märklin 1 locomotives (such as the Kof or T3) with special electronic circuits can be converted by the Märklin Service Department to digital operation with the Control Unit (6021). All of the current Märklin 1 digital decoders can be used only with the Control Unit (6021) and not with the older Central Control 1 (6030).



6083 k 83 Decoder.

Decoder panel for controlling turnouts, signals or uncoupler tracks.



6084 k 84 Decoder.

Decoder panel for tuning on/off continuous current for lighting circuits or motors in accessories.



6088 Decoder s 88.

Feedback module for contact generators on digital model railroad layouts.

6038 Adapter 180

6039 Adapter 80

6072 Extension Cable

6089 Adapter s 88

See pages 288/290 for illustrations and descriptions.

The complete Digital system is shown in its entirety on pages 284-293.

Explanation of Symbols



New item 1995



Suitable for universal train control on conventional layouts, in the DELTA multi-train control system and on digital layouts.



New version 1995



Locomotive in Digital version:

- Built-in digital decoder
- Electronic reversing
- Multi-train operation with up to 80 locomotive addresses
- Digitally controlled auxiliary function
- For all Märklin HO layouts with and without the Digital system



Hobby Assortment



Multi-train operation



Metal locomotive frame



Metal locomotive frame and body



Metal car frame



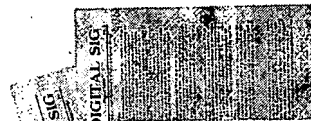
Metal car frame and body



Locomotive with high-efficiency propulsion:

- Five-pole high-efficiency motor
- Electronically controlled propulsion
- Adjustable maximum speed
- Adjustable acceleration rate
- Anti-slip control with overhead protection

tail and beauty of
ain collection in a
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ay be purchased
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ge.



Triple headlights front



Triple headlights front and rear



Triple headlights which change over with the direction of travel



One red marker light



Dual red marker lights



Triple headlights and dual red marker lights which change over with the direction of travel



Triple headlights and white marker light which change over with the direction of travel



Märklin close couplers with pivot point



Märklin close couplers in standard coupler pocket with pivot point



Märklin close couplers in standard coupler pocket with guide mechanism



Built-in interior lighting



Interior lighting can be installed (example: with 7330)



Built-in interior details



Power supply can be switched to operate from catenary



Locomotive/car has automatic mini-club couplers.



Locomotive/car is equipped with sprung buffers.



Automatic claw couplers can be replaced with reproduction prototype couplers.



Märklin exclusiv special models - produced in a one-time series